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CLAIMS

1. A method for managing the respective processing loads of
   a plurality of processors (1, 51, 52, 53, 54) networked
   in a processor network using a load balancing technique
   for load balancing, in which:

   a first network management processor (1) issues (S003) a
   processing load information collection message (21) to
   an adjacent processor (51), said adjacent processor (51)
   adds (S004) into the message its analysed processing
   load information and forwards said message (21) to yet
   another processor (52) of the processor network which
   repeats the adding and forwarding functions, wherein one
   processor forwards the message with the added processing
   load information to the first network management
   processor (1), which determines (S006), on the basis of
   the processing load information of the processors (1,
   51, 52, 53, 54) stored in said processing load
   information collection message (21) a load balancing
   technique for load distribution among the processors (1,
   51, 52, 53, 54) in said processor network.

2. A method according to claim 1, in which said processing
   load information collection message (21) is a first
   processing load exploration program unit (22), wherein
   said processing load exploration program unit (22)
   analyses (S004) the respective processing load of each
   of the processors (1, 51, 52, 53, 54) to which it is
   forwarded and stores corresponding processing load
   information.

3. A method according to claim 2,

characterized in that

said first network management processor (1) determines
(S006) as said load balancing technique a respective
load balancing method (a, b, c) for each of said
processors (1, 51, 52, 53, 54).

4. A method according to claim 3,

characterized in that

at least one of said processors (1, 51, 52, 53, 54) has
stored a plurality of load balancing methods (a, b, c)
and said first network management processor (1) sends
(S008) a load balancing method activation message (23)
to said at least one processor (1, 51, 52, 53, 54) for
activating the load balancing method (a, b, c)
determined for the processor.

5. A method according to claim 4,

characterized in that

prior to said first network management processor (1)
sending (S008) said load balancing method activation
message (23) to said at least one processor (1, 51, 52,
53, 54) for activating the load balancing method (a, b,
c) determined for the processor (1, 51, 52, 53, 54),
said first network management processor (1) determines
(S007) whether said load balancing method (a, b, c)
determined for the processor (1, 51, 52, 53, 54) is
presently stored at said processor (1, 51, 52, 53, 54).

6. A method according to claim 4 or 5,

characterized in that

said first network management processor (1) sends (S011)
to at least one processor (1, 51, 52, 53, 54), a load
balancing method implementation message (23) including

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the respective determined load balancing method (b) and said at least one processor (1, 51, 52, 53, 54) implements and activates (S008) said included load balancing method (b).

7. A method according to any of claims 2 to 6,
    characterized in that
    said first processing load exploration program unit (22)
    determines (S005) at each processor (1, 51, 52, 53, 54)
    whether the processor (1, 51, 52, 53, 54) is a network
    management processor (1) or not.

8. A method according to any of claims 2 to 7,
    characterized in that
    said first processing load exploration program unit (22)
    is passed (S009) from processor (1, 51, 52, 53, 54) to
    processor in accordance with a predetermined order of
    processors.

9. A method according to claim 2 or 7,
    characterized in that
    said first processing load exploration program unit (22)
    is passed (S009) from processor (1, 51, 52, 53, 54) to
    processor in a predetermined group of processors.

10. A method according to any of claims 2 to 9,
    characterized in that
    at least one further processing load exploration program
    unit (24) is passed (S009) from processor (1, 51, 52,
    53, 54) to processor in parallel with said first
    processing load exploration program unit (22).

11. A method according to claim 10,
    characterized in that

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said first processing load exploration program unit (22)
and said further processing load exploration program
unit (24) are passed (S009) from processor (1, 51, 52,
53, 54) to processor in different sequences.

12.   A method according to any preceding claim,
       characterized in that
       said plurality of processors (1, 51, 52, 53, 54)
       comprises at least one further network management
       processor (11).

13.   A network including a network management processor (1)
       and a plurality of networked processors (51, 52, 53, 54)
       and having incorporated a load balancing technique for
       managing processing loads amongst said networked
       processors (51, 52, 53, 54), characterised in that

       a)   a processing load information collection message
             (21) is provided including an instruction unit
             (211) for initiating an analysis of processing
             loads at a processor and a storage unit (212) for
             storing processing load information about the
             analysed processing loads;

       b)   each processor has a reception unit(60, 61, 62, 63,
             64) for receiving said processing load information
             collection message (21), processor (91, 92, 93, 94)
             for running said received exploration program unit
             (21), and transmission unit (70, 71, 72, 73, 74)
             for forwarding said processing load information
             collection message (21) to a next processor; and

       c)   said network management processor (1) has a
             transmission unit (60) for transmitting said

processing load information collection message to a
first processor in the processor network, and a
reception unit (70) for receiving said processing
load information collection message (21) from a
processor and a determining unit to determine (90),
on the basis of the processing load information of
the processors (1, 51, 52, 53, 54) stored in said
load exploration program unit storage section
(212), a load balancing technique for load
distribution among the processors (1, 51, 52, 53,
54) in said processor network.

14. A network according to claim 13 wherein

said processing load information collection message (21)
is a processing load exploration program unit (22), and
said instruction unit (211) of said processing load
information collection message is an analysis program
unit (221) for performing an analysis of processing
loads at a processor, and wherein said instruction unit
(211) of said processing load information collection
message (21) also causes the determining unit of said
network management processor (1) to determine said load
balancing technique.

15. A network according to claim 14,
     characterized in that
     said network management processor (1) has a determining
     unit to determine as said load balancing technique a
     respective load balancing method (a, b, c) for each of
     said processors (1, 51, 52, 53, 54).

16. A network according to claim 14 or 15,
     characterized in that

at least one of said processors (1, 51, 52, 53, 54) has
a storage unit to store a plurality of load balancing
methods (a, b, c), and said network management processor
(1) is adapted to send a load balancing method
activation message to (23) said at least one processor
(51, 52, 53, 54) for activating the load balancing
method (a, b, c) determined for the processor.

17.   A network according to any of claims 14 to 16,
      characterized in that
      said network management processor (1) has a transmission
      unit to send to at least one processor a load balancing
      method implementation message (23) including the
      respective determined load balancing method (b), and
      said at least one processor (1, 51, 52, 53, 54) has a
      receiver unit (921) to receive an to implement and
      activate said included load balancing method (a, b, c).

18.   A network according to any of Claims 14 to 17,
      characterized in that
      said transmission unit and said reception unit of each
      of said processors respectively is adapted such that
      said processing load exploration program unit is passed
      from processor (1, 51, 52, 53, 54) to processor in
      accordance with a predetermined order of processors.

19.   A network according to claim 9 or 14,
      characterized in that
      said transmission unit (60, 61, 62, 63, 64) and said
      reception unit (70, 71, 72, 73, 74) of each of said
      processors (1, 51, 52, 53, 54) respectively is adapted
      such that said processing load exploration program unit
      (22) is passed from processor (1, 51, 52, 53, 54) to
      processor in a predetermined group of processors.

20. A processing load information collection unit for use in
the management of the respective processing loads of a
plurality of processors (1, 51, 52, 53, 54) networked in
a processor network using a load balancing technique for
load balancing and having network management processor
(1), said processing load exploration collection unit
(21) comprising:

storage section (212), and instruction section (211),
said instruction section (211) further comprising:

a) a forwarding control section (2111) to cause said
network management processor (1) to issue said
processing load information collection message (21)
to a first one of said plurality of processors (1,
51, 52, 53, 54), and then to cause each one of said
plurality of processors to pass said processing
load information collection unit (21) to a further
one of said plurality of processors (1, 51, 52, 53,
54) respectively until it arrives again at said
network management processor (1), and

b) an analysis section (2112) to analyse the
respective processing load of each of said
processors (1, 51, 52, 53, 54) to which it is
forwarded on its reception thereby, the results of
each such analysis being stored in said storage
section (212), and

c) a load balancing technique selection section (2113)
to cause said network management processor (1) on
its reception thereby to determine, on the basis of
the processing load information of the processors
(1, 51, 52, 53, 54) stored in said storage section

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(212), a load balancing technique for load distribution among the processors (1, 51, 52, 53, 54) in said processor network.

21. A processing load information collection unit according to claim 20 wherein said instruction section comprises a program unit (221) which when executed on the respective processors;

a)   causes said network management processor (1) to issue said processing load information program unit (22) to a first one of said plurality of processors (1, 51, 52, 53, 54), and then to cause each one of said plurality of processors (1, 51, 52, 53, 54) to pass said processing load information program unit (22) to a further one of said plurality of processors (1, 51, 52, 53, 54) respectively until it arrives again at said network management processor (1),

b)   analyses the respective processing load of each of said processors (1, 51, 52, 53, 54) to which it is forwarded on its execution thereby, the results of each such analysis being stored in said storage section (212), and

c)   causes said network management processor (1) on its execution thereby to determine, on the basis of the processing load information of the processors (1, 51, 52, 53, 54) stored in said storage section (212), a load balancing technique for load distribution among the processors (1, 51, 52, 53, 54) in said processor network

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22. A processing load information collection unit according
to claim 21,

characterized in that

it causes said network management processor (1) on its
execution thereby to determine, on the basis of the
processing load information of the processors (1, 51,
52, 53, 54) stored in said storage section, a load
balancing technique for load distribution among the
processors (1, 51, 52, 53, 54) in said processor
network, for each of said processors (1, 51, 52, 53,
54).

23. A processing load exploration program unit according to
claim 21,

characterized in that

it further causes said network management processor (1)
on its execution thereby after said step of determining
a load balancing technique, to send a load balancing
method activation message (23) to said at least one
processor (1, 51, 52, 53, 54) for activating the load
balancing method (a, b, c) determined for the processor.

24. A processing load exploration program unit according to
claim 21,

characterized in that

it further causes said network management processor (1)
on its execution thereby, after said step of determining
a load balancing technique, to send to at least one
processor a load balancing method implementation message
(23) including the respective determined load balancing
method (b), and said at least one processor (1, 51, 52,
53, 54) implements and activates said included load
balancing method (a, b, c).

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25. A processing load exploration program unit according to
    claim 21 to 24,
    characterized in that
    said processing load exploration program unit (22)
    further has a determining unit to determine at each
    processor (1, 51, 52, 53, 54) whether the processor (1,
    51, 52, 53, 54) is said network management processor (1)
    or not.

26. A processing load exploration program unit (22)
    according to any of claims 21 to 24,
    characterized in that
    said instruction section is adapted to cause each one of
    said plurality of processors (1, 51, 52, 53, 54) to pass
    said processing load exploration program unit to a
    further one of said plurality of processors (1, 51, 52,
    53, 54) respectively in accordance with a predetermined
    order of processors.

27. A processing load exploration program unit (22)
    according to any of claims 21 to 26,
    characterized in that
    said instruction section is adapted to cause each one of
    said plurality of processors to pass said processing
    load information collection message to a further one of
    said plurality of processors respectively in a
    predetermined group of processors.